2012

Bio-Cultural Knowledge and the Challenges of Intellectual Property Rights Regimes for African Development

Ikechi Mgbeoji

Osgoode Hall Law School of York University, imgbeoji@osgoode.yorku.ca

Source Publication:

Dalhousie Law Journal. Volume 35, Number 2 (2012), p. 397-424.

Ikechi Mgbeoji*

Bio-Cultural Knowledge and the Challenges of Intellectual Property Rights Regimes for African Development**

African states have, since the colonial encounter, been part of the international regimes on intellectual property rights. Formal accession to various treaties and conventions on intellectual property rights instruments should not be mistaken for actual internalization of the policies, structures and norms required for reaping the promised benefits of participation in such regimes. There is ample evidence showing that most African states do not have the requisite structures for fruitful engagement with international intellectual property rights regimes. Until this anomaly is rectified, African states' engagement with international intellectual property regimes will remain structurally flawed and inimical to the human development of African peoples.

Les États africains sont, depuis l'époque coloniale, partie aux régimes internationaux en matière de droits de propriété intellectuelle. L'accession officielle à divers traités et conventions sur les instruments relatifs aux droits de propriété intellectuelle ne doit pas être confondue avec l'internalisation des politiques, des structures et des normes requises pour récolter les fruits promis de la participation à ces régimes. Les preuves abondent, qui attestent que la plupart des États africains n'ont pas les structures requises pour tirer tous les avantages requis de leur participation aux régimes internationaux relatifs aux droits de propriété intellectuelle. Jusqu'à ce que cette anomalie soit rectifiée, l'adhésion par les États africains à ces régimes continuera de souffrir de lacunes structurelles et d'être peu favorable au développement humain des peuples africains.

* LLB (Nig), BL (Lagos), LLM, JSD (Dalhousie). I am indebted to Professor Chidi Oguamanam and Professor George Nnonna for comments on earlier drafts of this paper.

** An earlier version of this paper was delivered as the 2011 convocation lecture at the Nigerian Institute of Advanced Legal Studies (NIALS) on 6 December 2011. Some parts of this article, in particular section 2, have been extracted from my earlier work entitled, *Global Biopiracy* (Vancouver: University of British Columbia Press, 2004).

Introduction

It is generally recognized that Hugh Kindred is one of the most influential law teachers and legal scholars in contemporary Canada. His expertise in the areas of public international law, maritime law, and transport law is not in any shade of dispute. However, a key but understated aspect of his influence, indeed, impact on public international law is his focus on the experiential and practical status of international rules and prescriptions at the municipal level. Another way of framing the issue is to determine whether states are in fact complying with and implementing their obligations arising from accession to international treaties. More importantly, are those obligations truly useful and beneficial to states already burdened with inefficient institutions? For African states this question has significant ramifications, especially in the field of international intellectual property law.

Within this context, the central question addressed in this paper is whether, despite accessions to a multitude of Intellectual Property Rights (IPRs) treaties by African states, IPRs regimes in Africa, as presently constituted, have any role to play in the protection and development of bio-cultural knowledge in Nigeria. And if those IPRs regimes are not up to the task, why is it so? The thrust of the argument here is that owing to historical foundational flaws in African IPRs regimes, coupled with the cultural dissonance between Eurocentric IPRs regimes and indigenous African culture and models of economic production, the dominant model of IPRs deriving their life force from international treaties and practices has proven inadequate for the protection of medicinal bio-cultural knowledge in Africa. Given the broad scope of bio-cultural resources, this paper focuses on the medicinal aspects of bio-cultural knowledge.

I approach the subject in three phases. The first phase is introductory and lays out the definitional concepts and issues relating to medicinal bio-

cultural knowledge. More importantly, it debunks the notion that African societies have not made substantial intellectual contributions towards the development of bio-cultural knowledge. The pertinent question is why do contemporary IPRs regimes treat African bio-cultural knowledge as unworthy of legal protection?

The second phase explores the relationship between bio-cultural knowledge and dominant IPRs, such as patents, trademarks, copyrights, and industrial designs. Structurally, this phase is a pincer movement or double envelopment, a venerated military tactic of African pedigree.[1] The first arm of the pincer deploys a Derridean post-structuralist approach to deconstruct the colonial subordination of African medicinal bio-cultural knowledge to Western episteme and IPRs regimes.

I argue in this first arm of the pincer that the colonial capture and detention of traditional epistemic regimes in Africa is responsible for the delegitimization of the intellectual contributions of African societies to medicinal bio-cultural knowledge.[2] Recognizing the power embedded in knowledge systems and traditional epistemic communities, it was crucial for the imperial powers to delegitimize and overthrow the pre-existing African bio-cultural western knowledge systems and their credentialing authorities.[3]

As Chidi Oguamanam has observed, by rubbishing the culture, intellectual ability, and indigenous regimes of knowledge accreditation in Africa, bio-cultural knowledge was banished to the peripheries of neglect.[4] The paradox is that, while the dominant IPRs regimes purport to be skeptical of African bio-cultural knowledge, the regimes of contemporary IPRs enable the appropriation of African bio-cultural knowledge. This phenomenon, aided by the instrumentalities of international IPRs instruments and structures, cannot be fully understood without the analytical aid of the critical scholarship of Afrocentric scholars such as

1. For students of warfare, the greatest and original exponent of the pincer movement was Hannibal. He executed this manoeuvre at the Battle of Cannae in 216 BCE. This is viewed by military historians as one of the greatest battlefield manoeuvres in history. The pincer movement was a standard tactic used by Shaka the Zulu. See Adrian Goldsworthy, *The Punic Wars* (London, UK: Cassell, 2001).

2. On deconstruction, see Jacques Derrida, *Writing and Difference* (Chicago: University of Chicago Press, 1980).

3. Michel Foucault, *The Archealogy of Knowledge* (New York: Harper & Row, 1972); Michel Foucault, *Madness & Civilization* (New York: Pantheon, 1965); and Michel Foucault, *The Order of Things* (New York: Pantheon, 1973).

4. Chidi Oguamanam, "Beyond Theories: Intellectual Property Dynamics in the Global Knowledge Economy" (2009) 9:2 Wake Forest Intellectual Property Law Journal 104. See also Olufunmilayo Arewa, "TRIPs and Traditional Knowledge: Local Communities, Local Knowledge, and Global Intellectual Property Frameworks" (2006) 10:2 Marq Intell Prop L Rev 155.

Obiora Okafor,[5] Mohammed Bedhjaoui, Makau wa Mutua, Anthony Anghie, James Gathii, and other exponents of the Third World Approaches to International Law (TWAIL).[6] Thus, the first flank of the pincer demonstrates the complicity of international law in foisting on Africa a toxic brew of legislation, norms, and institutions designed to privilege western IPRs, whilst extracting the bio-cultural riches of the colonized territories.

For the second arm of the pincer, two primary sites of colonial power and resistance are identified. The first is, of course, the institution of traditional medical practice. Through religious, epistemic, and cultural vilification, the native healer was stripped of authority and turned into a social pariah. The second site of colonial power and resistance is language. The capacity of language to act as a vehicle for the sharing and transmission of knowledge was effectively compromised, thus truncating the orderly transmission and regeneration of knowledge. On these, I am indebted to the insights of Chinua Achebe, Edward Said,[7] Noam Chomsky, Michel Foucault, and Jacques Derrida.[8]

The application of Western IPRs to African bio-cultural knowledge is problematic,[9] but a more worrisome problem is the colonial structures of IPRs law and administration in Africa. In sum, this paper argues that despite the formal retreat of the imperial powers from Africa, most of the IPRs regimes created in the colonial era to serve imperial needs persist to the detriment of medicinal bio-cultural knowledge. Contemporary IPRs institutions and norms perpetuate what David Kennedy has characterized

5. Obiora Okafor, "Critical Third World Approaches to International Law (TWAIL): Theory, Methodology or Both" (2008) 10:4 International Community Law Review 371; Obiora Okafor, "Newness, Imperialism, and International Legal Reform in our Time" (2005) 43:2 Osgoode Hall LJ 171.

6. On TWAIL, see, Karin Mickelson, "Taking Stock of TWAIL Histories" (2008) 10:4 International Community Law Review 355; Antony Anghie & BS Chimni, "Third World Approaches to International Law and Individual Responsibility in Internal Conflict" in Steven Ratner & Anne-Marie Slaughter, eds, *The Methods of International Law* (Washington, DC: American Society of International Law, 2004) at 185.

7. Chinua Achebe, *The Trouble With Nigeria* (Essex: Heinemann, 1984); Edward Said, *Culture and Imperialism* (New York: Vintage Books, 1994); Edward Said, *Power, Politics and Culture* (New York: Vintage Books, 2002).

8. Noam Chomsky, *Language and Mind* (New York: Harcourt Brace & World, 1968); M Foucault, *The Archeology of Knowledge* (New York: Harper & Row, 1972); M Foucault, *Madness & Civilization* (New York: Pantheon, 1965); M Foucault, *The Order of Things* (New York: Vintage, 1973); Jacques Derrida, *Speech and Phenomena: And other Essays on Husserl's Theory of Signs* (Evanston, IL: Northwestern University Press, 1979) [Derrida, *Speech*]; Jacques Derrida, *Of Grammatology* (Baltimore, MD: The John Hopkins University Press, 1998).

9. See, e.g., Michael Blakeney, "The Protection of Traditional Knowledge under Intellectual Property Law" (2000) 22 Eur IP Rev 251; Paul Heald, "The Rhetoric of Biopiracy" (2003) 11:2 Cardozo J Int'l & Comp L 519.

as the "professional assimilation and intellectual invisibility"[10] of modern IPRs practitioners in Africa. Indeed, with the recent conclusion of several trade-related aspects of intellectual property rights (TRIPs)-plus treaties, the subordination of African needs to imperial IPR dictates has intensified.[11] At some points in this paper, I have leavened my comments with personal observations of the conduct of administrators entrusted with the duty of implementing IPRs treaties and instruments.

Quo vadis? In the third phase, I argue that although African states are bound by their treaty obligations in IPRs, there is still ample room for progressive ideas, especially in the area of IPRs administration. In particular, our IPRs laws are in need of significant reform in those administrative areas with significant impact on how knowledge is shared and transmitted. For example, Nigeria, which will be the subject of examples cited in this paper, should actively create a means for substantive examination of both local and foreign patent applications. Also, the pertinent IPRs regimes can be adapted to make the most of Geographical Indications and Certification Marks for the protection of medicinal bio-cultural knowledge.

The administration of medicines and drugs laws in African states should be oriented towards safety, rather than an inquisitorial approach towards African bio-cultural medicinal products. There is an urgent need to decolonize the mindset evident in drugs and medicine laws in several African states. Similarly, copyright laws in Africa can be geared towards greater open access to copyright works. As presently constituted, the administration of IPRs laws in African states is devoted towards using scarce resources to protect foreign interests. In summary, there is significant intellectual and administrative dissonance between international treaty obligations of African states in IPRs matters and domestic imperatives and necessities.

I. *What is medicinal bio-cultural knowledge?*

The term bio-cultural knowledge means "tradition-based literary, artistic or scientific works, inventions, scientific discoveries, undisclosed information; and all other tradition-based innovations and creations on the use or management of biological materials and which result from intellectual activity in the industrial, scientific literary or artistic

10. David Kennedy, "The TWAIL Conference: Keynote Address, Albany, New York, April 2007" (2007) 9:4 International Community Law Review 333 at 335.
11. Peter Yu, "Trips Enforcement and Developing Countries" (2011) 26:3 Am U Int'l L Rev 727.

fields."[12] The emphasis in this paper is on medicinal aspects of bio-cultural knowledge. More importantly, the "tradition-based" character of medicinal bio-cultural knowledge should not be misconstrued as denoting archaic knowledge. Much of this knowledge is actually quite new, but it has a social meaning and legal character entirely unlike the knowledge indigenous people acquire from settlers and industrialized societies.[13]

As I have argued elsewhere,[14] categories of bio-cultural knowledge are varied and often overlap. Excluded from this definition would be items not resulting from intellectual activity in the industrial, scientific, literary, or artistic fields, such as human remains, languages in general, and other similar elements of "heritage" in the broad sense.[15] International law[16] and leading scholars[17] on the subject recognize the dynamism, holism, and diversity of such tradition-based (or "traditional") knowledge. Traditional knowledge often transmits the history, beliefs, and traditions of a particular people.

The second common misconception about bio-cultural knowledge is that the knowledge is a mere discovery of "natural phenomena" waiting for the fortunate discoverer. As Gurdial Nijar has observed:

> Traditional uses, although based on natural products, are not 'found in nature'; as such. They are products of human knowledge. To transform a plant into a medicine, for example, one has to know the correct species, its location, the proper time of collection (some plants are poisonous in certain seasons), the part to be used, how to prepare it (fresh, dried, cut in small pieces, alcohol, the addition of salt, etc.), the way to prepare it

12. World Intellectual Property Organization, "Intellectual Property Needs and Expectations of Traditional Knowledge Holders," *WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998–1999)* (Geneva: WIPO, 2001) at 25.

13. Russell Barsh, "Forests, Indigenous Peoples and Biodiversity: Contribution of the Four Directions Council" (Submission to the Secretariat of the Convention on Biological Diversity, 1996).

14. Ikechi Mgbeoji, "Beyond Patents: The Cultural Life of Native Healing and the Limitations of the Patent System as a Protective Mechanism for Indigenous Knowledge on the Medicinal Uses of Plants" (2006) 5 CJLT 1 [Mgbeoji, "Beyond Patents"].

15. The Crucible II Group, *Seeding Solutions, Volume 2: Options for National Laws Governing Access to and Control over Genetic Resources and Biological Innovations* (Ottawa: IDRC/International Plant Genetic Resources Institute/Dag Hammarskjold Foundation, 2001).

16. For example, article 8 (j) of the *Convention on Biological Diversity* provides that:
> Each contracting party shall, as far as possible and as appropriate subject to national legislation, respect, preserve, and maintain knowledge, *innovations* and practices of indigenous and local communities....

Convention on Biological Diversity, 5 June 1992, 1760 UNTS 79 [*CBD*].

17. The Crucible Group, *People, Plants and Patents: The Impact of Intellectual Property in Trade, Plant Biodiversity and Rural Society* (Ottawa: IDRC, 1994); Roy Ellen, Peter Parkes & Alan Bicker, eds, *Indigenous Environmental Knowledge and its Transformations: Critical Anthropological Perspectives* (Amsterdam: Harwood Academic Publishers, 2000).

(time and conditions to be left in the solvent). And finally, the posology (route of administration and dosage).[18]

The fact that bio-cultural knowledge is natural does not necessarily mean that there is an absence of human intellectual input.

1. *Plant genetic centres and bio-cultural knowledge*

Why does knowledge of biodiversity matter? It matters for at least three principal reasons: economic value, self-identity, and sustainability. Biodiversity refers to variability among living organisms from all sources including ecosystems and ecological complexes.[19] It encompasses genetic diversity,[20] species diversity,[21] and ecosystem[22] diversity. Plant life forms are estimated to number 250,000 species. Medicinal products derived from plants form the basis of primary health care of at least eighty per

18. Gurdial Nijar, *TRIPS and Biodiversity, The Threat and Responses: A Third World View* (Malaysia: Third World Network, 1996) at 16.

19. *CBD*, *supra* note 16 at article 2. See also, Edward Wilson, *The Diversity of Life* (Cambridge, MA: Harvard University Press, 1992) at 393. It has been estimated that there are probably 1.4 million known species or organisms on this planet.

20. Genetic diversity means the variety of genes. Inside the nucleus of every animal or plant cell are chromosomes, thread-shaped bodies consisting largely of DNA (deoxyribonucleic acid) of four strings, each of which comprises about a billion nucleotide pairs. If stretched out fully, the DNA would be roughly 1 meter long. The full information contained in DNA if translated into ordinary-size letters of printed text would fill all 15 editions of the *Encyclopaedia Britannica*. Genes confer particular characteristics on the organisms that inherit them. Each gene is in effect a chemical instruction controlling a particular characteristic. These characteristics may include resistance to disease, rapid growth, an environmental adaptation to a particular factor, capacity to grow straight, etc. Genes vary and the variant of the same gene is called an allele. Thus, differences in the genetic make-up of a species are caused by different alleles of each gene. A particular combination of genes is known as a genotype and a given set of chromosomes is called a genome. The term gene pool means the total number of genes within a group of interbreeding plants or animals; that is, the pool of genes within a population. The population encompasses its wild and cultivated relatives. See J Shereeve, *The Genome War* (New York: Ballantine Books, 2004); G Poste, "The Case for Genomic Patenting" (1995) 378 Nature 534; M Rimmer, "Genentech and the Stolen Gene: Patent Law and Pioneer Inventions" (2002) 5 Bio-Science Law Review 198.

21. Species diversity refers to the variety of species within an ecosystem. See Z Nayeh, "From Biodiversity to Ecodiversity: A Landscape-Ecology Approach to Conservation and Restoration" (1994) 2:4 Restoration Ecology 180-189.

22. An ecosystem can be defined as the physical environment and all the organisms in a given area, together with the web of interactions of those organisms with that physical environment and with each other. See R Costanza et al, "The Value of the World's Ecosystem Services and Natural Capital" (1997) 387 Nature 253.

cent of the population of the global South,[23] a number far in excess of four billion.[24] Almost a quarter of all doctors' prescriptions in the global North[25] have their origins in plant species. The dramatic cases of blockbuster drugs developed from the rosy periwinkle from Madagascar,[26] Cameroonian vine,[27] Nigerian bitter-cola,[28] and the Alligator pepper,[29] respectively, underscore the irreplaceable reliance on plants for medication by humanity since time immemorial. Plants constitute complex chemical storehouses that contain many actual and undiscovered potential uses in modern medicine.[30] Indeed, of the 250,000 plants known to be in existence, only ten percent have been "tested" for medicinal purposes.

23. As used in this article, the term "South" refers to the gene-rich, ecologically diverse states of Africa, South America, Asia (excluding Japan) and Oceania. These states are also referred to or described as "less developed," "developing," or the "Third World" countries of the world. I am aware that the concept of "South" does not create a homogenous or monolithic structure or culture of peoples. This concept, however, is only used for the ease and convenience of analysis. See Winston Langley, "The Third World: Towards a Definition" (1981) 2 BC Third World LJ 1; Frederick Abbott, "Protecting First World Assets in the Third World: Intellectual Property Negotiations in the GATT Multilateral Framework" (1989) 22:4 Vand J Transnat'l L 689.

24. Erin Newman, "Earth's Vanishing Medicine Cabinet: Rain Forest Destruction and Its Impact on the Pharmaceutical Industry" (1994) 20:4 Am J L & Med 479; Amy Guerin Thompson, "An Untapped Resource in Addressing Emerging Infectious Diseases: Traditional Healers" (1998) 6:1 Ind J Global Legal Stud 257.

25. The term "North" as deployed in this article refers to the states of Europe, North America, and New Zealand, Australia, and Japan. They are also variously described as the "rich," "industrialized," "developed," or "advantaged" states of the world. Generally speaking, these countries tend to share a similarity of relative poverty of naturally occurring or indigenous biological diversity.

26. The rosy periwinkle is a plant found only in Madagascar. It has well publicized curative properties for childhood leukaemia and Hodgkin's disease.

27. This rare Cameroonian vine contains chemicals like Michellamine B, capable of blocking the reproduction of the AIDS virus. See "Scientists Say Rare Vine Offers Hope for AIDS Cure," *AIDS Weekly* (17 May 1993) at 13.

28. The Igbo bitter-cola ("Akuilu" in Igbo, "Orogbo" in Yoruba, and "Namijin-goro" in Hausa) is now used to produce some anti-cancer and HIV-retroviral drugs. See, EO Odebunmi et al, "Proximate and nutritional composition of kola nut (*Cola nitida*), bitter kola (*Garcinia cola*) and alligator pepper (*Afromomum nelegueta*)" (2009) 8:2 African Journal of Biotechnology 308 at 308-310.

29. The stupendous potential of tropical plants to yield complex chemicals is a function of their evolutionary circumstances, as they have had to develop complex chemical arsenals to repel predators.

30. According to the *Chiang Mai Declaration*, "we recognise the vital importance of medicinal plants in healthcare...the value of the medicinal plants used today and the great potential of the plant kingdom to provide new drugs": see "Chiang Mai Declaration: Saving Lives by Saving Plants" reproduced in O Akerele et al, eds, *The Conservation of Medicinal Plants: Proceedings of an International Consultation* (Cambridge, UK: Cambridge University Press, 1991).

The economic implications of trade in plant products[31] have not been lost on the global North.[32] This has also resulted in the intensive application of IPRs to plant-based genetic resources primarily sourced from or originating in the global South. Plant species are not evenly distributed across the face of the earth. Although the global North is currently a net exporter of plant products, history and statistics indicate that virtually all of the "developed countries" foodstuffs originated in the global South. Corn, rice, potatoes, sugar, citrus fruit, bananas, tomatoes, coconuts, black peppers, nutmeg, pineapples, chocolate, coffee, and vanilla all originated in the global South. Rice originated from Asia and Africa. Wheat has its origins in the Middle East.

The geographic size of modern states is irrelevant to measuring species or genetic diversity. For example, Brazil, with only 6.3% of the world's surface land area, has 22% of the planet's flowering plants. One twenty-acre tract in Malaysia supports 750 species of tree. This is more than all the tree species diversity in the United States of America. Madagascar contains about one quarter of the plant species in Africa. Madagascar is also home to more than fifty species of coffee.[33]

According to William Lesser, "the United States, a major food crop producer, is completely dependent on foreign germplasm."[34] North America posts an 85% dependency on the global South in regards to genetic diversity used in agriculture and industry in the region. The genetic centres of the world are in the global South.[35] Since Vavilov published his findings in 1925, the global politics of plant resources[36] has assumed a North-South character. Thus, an array of institutions, legal norms, and mechanisms has been designed to relocate the genetic centre of the world

31. Kerry Ten Kate & Sarah Laird, *The Commercial Use of Biodiversity: Access to Genetic Resources and Benefit Sharing* (London: Earthscan Publications, 1999) at 1.

32. Thomas Mesevage, "The Carrot and the Stick: Protecting U.S. Intellectual Property in Developing Countries" (1991) 17:2 Rutgers Computer & Tech LJ 421; Stefan Kirchanski, "Protection of U.S. Patent Rights in Developing Countries: U.S Efforts to Enforce Pharmaceutical Patents in Thailand" (1994) 16:2 Loy LA Int'l & Comp LJ 569; Edgar Asebey & Jill Kempenaar, "Biodiversity Prospecting: Fulfilling the Mandate of the Biodiversity Convention" (1995) 28:4 Vand J Transnat'l L 703.

33. Jack Kloppenburg Jr, *First The Seed: The Political Economy of Plant Biotechnology, 1492–2000* (Cambridge, UK: Cambridge University Press, 1988) at 47-48.

34. William Lesser, *Sustainable Use of Genetic Resources under the Convention on Biological Diversity-Exploring Access and Benefit Sharing Issues* (Oxford: CAB International, 1997) at 14.

35. Nikolai Vavilov, "Studies on the Origin of Cultivated Plants" (1925) 16:2 Bulletin of Applied and Plant Breeding 1; Nikolai Vavilov, *The Origin, Variation, Immunity and Breeding of Cultivated Plants*, translated by K Chester (New York: Ronald Press, 1951).

36. Anthony Stenson & Tim Gray, *The Politics of Genetic Resource Control* (London, UK: Macmillan Press, 1999).

and extract surplus profit from this process, by industrialization and by protection via IPRs.

The reason for the profusion of plant diversity in the global South is both natural and artificial. As a general rule of geography, moving from the poles to the equator, species richness naturally increases in magnitude. This is largely as a result of the warmer and humid climate, which is favourable to the multiplication of life forms. Speciation is thus partly induced by geography. Species mutate and diversify in line with geographical diversity. Hence, a part of the explanation for the South's incredible plant species diversity lies in its complex geography.[37]

But nature is not the only agent at work here. Human intellectual intervention plays a critical role in the multiplication and sustenance of plant species. Plant diversity correlates with cultural diversity. For example, of the nine countries that account for 60% of human languages, six of these centres of phenomenal cultural diversity are also mega-diversity countries with exceptionally high numbers of unique plant species. Furthermore, the domestication of plants leads to increased variety of numbers.[38] This is due to the phenomenon of polyploidy, which is the doubling or multiplication of chromosome numbers.[39]

The greater the cultural diversity of the local farmers, the more likely they are to breed plants for various cultural purposes such as religious or social festivals, thus multiplying the diversity of plants. Put simply: "agro-biodiversity is not a strictly natural phenomenon but derives from human activities. Indeed, farmers make selections to enrich biodiversity all the time."[40] In this wider context, "cultural diversity and natural diversity are closely linked concepts."[41] In sum, the immense geographical diversity[42] and cultural complexity of the South practically compel farmers to breed plants suitable for various geographical and cultural imperatives.

---

37. Kloppenburg, *supra* note 33.

38. Erich Isaac, *Geography of Domestication* (New Jersey: Prentice-Hall, 1970); Bailey Stevens, *The Recovery of Culture* (New York: Harper & Brothers, 1949).

39. Lara Ewens, "Seed Wars: Biotechnology, Intellectual Property, and the Quest for High Yield Seeds" (2000) 23:2 BC Int'l & Comp L Rev 285.

40. Annie Patricia Kameri-Mbote & Philippe Cullet, "Agro-Biodiversity and International Law—A Conceptual Framework" (1999) 11:2 J Envtl L 257 at 260.

41. Elias Carreno Peralta, "A Call for Intellectual Property Rights to Recognize Indigenous People's Knowledge of Genetic and Cultural Resources" in Anatole Krattiger et al, eds, *Widening Perspectives on Biodiversity* (Switzerland: IUCN, 1994) at 288.

42. For example, "on one uphill traverse of a rice field in Liberia, farmers grew fourteen different varieties of rice, each matched to the degree of slope, amount of insulation, and type of soil in the particular paddies": see Craig Jacoby & Charles Weiss, "Recognizing Property Rights in Traditional Biocultural Contribution" (1997) 16 Stan Envtl LJ 74 at 84. See also Walter Reid & Kenton Miller, *Keeping Options Alive: The Scientific Basis for Conserving Biodiversity* (Washington, DC: World Resources Institute, 1989) at 57.

2. *The rhetoric and reality of biopiracy*

Until recently, modern IPRs regimes were dismissive of the intellectual content of bio-cultural knowledge in both medicinal and agricultural contexts. At best, bio-cultural knowledge was damned with faint praise.[43] The intellectual interventions of colonized peoples in the development of plants for medicinal or agricultural purposes were derided as superstition and unscientific. Even with the gradual emancipation occasioned by contemporary international law instruments such as the Food and Agriculture Organization's *International Treaty on Plant Genetic Resources for Food and Agriculture*, the *Convention on Biological Diversity*, and the *Nagoya Protocol*[44] thereto, to mention a few, African bio-cultural knowledge has largely been subordinated to Western empirical scrutiny and the gate-keeping functions of IPRs regimes.

Ironically, in the past two decades several cases of appropriation of medicinal bio-cultural knowledge have been brought against foreign researchers, bioprospectors, and other entities actively scouring Africa's cornucopia for the next miracle drug or germplasm.[45] This phenomenon is facilitated by the fact that Western IPRs are demonstrably ill-suited for the protection of medicinal bio-cultural knowledge. In fact, the major IPRs regimes facilitate the appropriation of the intellectual creations of African societies.[46]

The theft of bio-cultural knowledge has given rise to allegations of "biopiracy"[47] against the global North.[48] The contestation over the meaning and processes of biopiracy[49] cannot be undertaken outside the historical milieu in which the term arose. Western intellectual property proprietors have often accused states in the global South of "pirating" or unlawfully "appropriating" the intellectual property rights of industrialized

43. Daniel Gervais, "Spiritual but not Intellectual? The Protection of Sacred Intangible Traditional Knowledge" (2003) 11:2 Cardozo J Int'l & Comp L 467.

44. *International Treaty on Plant Genetic Resources for Food and Agriculture*, 3 November 2001, 2400 UNTS; *CBD*, *supra* note 16; and *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of the Benefits Arising from Their Utilization to the Convention on Biological Diversity*, 29 October 2010, UNEP-FAO, 10th Meeting, UN Doc UNEP/CBD/COP/DEC/X/1 (2010).

45. Ikechi Mgbeoji, *Global Biopiracy: Patents, Plants, and Indigenous Peoples* (Vancouver: University of British Columbia Press, 2005).

46. Naomi Roht-Arriaza, "Of Seeds And Shamans: The Appropriation of the Scientific and Technical Knowledge of Indigenous and Local Communities" (1996) 17:3 Mich J Int'l L 919.

47. Vandana Shiva, *Biopiracy: The Plunder of Nature and Knowledge* (Cambridge, MA: South End Press, 1997).

48. Paul Heald, "The Rhetoric of Biopiracy" (2003) 11:2 Cardozo J Int'l & Comp L 519.

49. Graham Dutfied, "TRIPs-Related Aspects of Traditional Knowledge" (2001) 33:2 Case W Res J Int'l L 233 at 235; Graham Dutfield, "What is Biopiracy?" (International Expert Workshop on Access to Genetic Resources and Benefit Sharing, 2004), online: modern CMS <http://modernems.ecosystemsmarketplace.com/respository/modernems_documents/1.3.pdf>.

entities. On the other hand, many states of the global South contend that industrialized states, business entities, and research institutions often "pirate" or appropriate bio-cultural resources developed in the South. Therefore, the global South applies or uses the term "biopiracy" in a reverse form to describe what they observe as a misappropriation or theft of bio-cultural knowledge.[50]

Appropriation of bio-cultural resources operates on the framework of epistemic dissonance between Western IPRs and traditional knowledge systems. Innovations or inventions made by "unlettered people" in "informal" settings hardly qualify for adulation by "scientists" or protection via the major IPRs regimes. For example, local farmers in Ibadan, Nigeria developed an insect-resistant cowpea. Given that those local farmers did not "publish" their findings or their results in a "reputable academic journal" reviewed by their "peers," their scientific insights counted for nothing. On a trip to Nigeria, Angharad Gatehouse, a scientist at the University of Durban, obtained some of these seeds. Using "formal" techniques, he identified in "scientific language" the genetic mechanism by which insect-resistance is conferred to the cowpea. As Buchanan notes, "he [the scientist] promptly left the university and joined Agricultural Genetic Company of Cambridge and they proceeded to apply for a patent on the 'invention.'"[51]

In its essence, biopiracy is the unauthorized commercial use or appropriation of biological resources and/or associated traditional knowledge without compensation or acknowledgement of the source of that bio-cultural knowledge. Biopiracy also refers to the asymmetrical and unrequited movement of plants and biocultural knowledge from the South to the North through the processes of international institutions, especially IPRs regimes and International Agricultural Research Centres. As Rosemary Coombe has rightly pointed out, this process is characterized by the non-recognition of the intellectual contributions of holders and practitioners of traditional knowledge towards the improvement of the plants or creation of the bio-cultural knowledge in question.[52] As biotechnology improves,

50. Chidi Oguamanam, "Localizing Intellectual Property in the Globalization Epoch: The Integration of Indigenous Knowledge" (2004) 11:2 Ind J Global Legal Stud 135.

51. James Buchanan, "Between Advocacy and Responsibility: The Challenge of Biotechnology for International Law" (1994) 1 Buff J Int'l L 221.

52. Rosemary Coombe, "The Recognition of Indigenous Peoples' and Community Traditional Knowledge in International Law" (2001) 14:2 St Thomas L Rev 275.

cases of biopiracy are bound to increase.[53] Why are the dominant IPRs systems contemptuous of medicinal bio-cultural knowledge?

3. *The colonial origins and outlook of IPRs regimes in Africa*

The short answer is that knowledge is a form of intellectual expression operating within a cultural and industrial framework. Western IPRs systems were birthed and designed in Europe to protect Eurocentric concepts of knowledge and to facilitate the global merchandising of goods and services produced in the industrial model fashioned in Europe. Given the overtly racist and capitalistic foundations of the colonial encounter, expressions of intellectual capacities within African cultural frameworks were deemed inherently inferior and unworthy of legal protection by IPRs regimes. In virtually all colonized territories, including Africa, the Eurocentric IPRs systems were designed for the protection of western forms of intellectual expression, to the neglect of indigenous intellectual and cultural expression.

African IPRs regimes are continuities of the colonial order. For example, the Nigerian Trademarks and Patents Office was established in 1901 through the *Trademarks Ordinance*. In other words, the Trademarks Office predated the amalgamation of the North and South Protectorates of Nigeria by Lord Lugard in 1914. There were amendments to the ordinance in 1910 and 1914,[54] all modeled after the laws and preferences of imperial Britain.

Similarly, African engagement with the global IPRs regime was on the basis of colonial fiat. For example, the *Paris Convention for the Protection of Industrial Property*, the ultimate ancestor of global IPRs regimes (concluded on 20 March 1883), became operational in Nigeria in March 1884 via British accession to the *Convention*. Of course, under the principle of state succession to treaties,[55] Nigeria has, since 1963, remained a signatory to the *Paris Convention*. Thus, to understand the modern character and process of IPRs vis-à-vis its relationship with medicinal bio-cultural knowledge in Africa, we must first, as Jacques Derrida noted,[56] deconstruct the structure and process of the imperial order

53. Amy Carroll, "Not Always the Best Medicine: Biotechnology and the Global Impact of US Patent Law" (1995) 44:6 Am UL Rev 2433 at 2439; but see Robert Gutowski, "The Marriage of Intellectual Property and International Trade in the TRIPSs Agreement: Strange Bedfellows or a Match made in Heaven" (1999) 47 Buff L Rev 713.

54. See *The Laws of the Colony of Southern Nigeria* (London: Stevens and Sons, 1908) at 675; Osita Eze, "Trademarks in Nigeria" (1979) 7:3 World Development 727 at 727-736.

55. *Vienna Convention on Succession of States in Respect of Treaties*, 23 August 1978, 1946 UNTS 3 (entered into force 6 November 1996).

56. Derrida, *Speech and Phenomena*, *supra* note 8.

and international law through which the colonial encounter was birthed and institutionalized in African territories.

As Anthony Anghie[57] and other scholars[58] have pointed out, international law, then parading itself as "the gentle civilizer of nations,"[59] was the enabling framework by which the devastating colonial encounter was moderated. Marti Koskenniemi, in his unanswerable critique, has conclusively demonstrated that the civilizational impulse of international law, a task which King Leopold of Belgium characterized as bringing peace and light to the "valley,"[60] was a fraud and a sham. Five fundamental defects of the colonial structure of IPRs in Africa are responsible for the superior-inferior relationship between Eurocentric IPRs and medicinal bio-cultural knowledge in Africa. A post-structuralist analysis may deconstruct these five flaws as "five leprous fingers on one leprous hand."[61]

The first flaw relates to the large scale seizure of land from the so-called "backward territories"[62] and peoples.[63] Lamenting the violent seizure of African territories, a newspaper noted in 1885 "the world has, perhaps, never witnessed a robbery on so large a scale."[64] It is impossible to discuss medicinal bio-cultural knowledge without reference to land. The forests and farmlands constitute the laboratory for the development of medicinal bio-cultural plants. It is on land that forests and groves grow and regenerate themselves. A particularly effective method of plant conservation and development of medicinal plants was the "taboo system"[65] in which "sacred groves" or "evil forests" were set aside for the restricted use of authorized persons. In fact, in most places in Africa,

57. Anthony Anghie, *Imperialism, Sovereignty, and the Making of International Law* (Cambridge, UK: Cambridge University Press, 2007).

58. Sundhya Pahuja, *Decolonising International Law: Development, Economic Growth, and the Politics of Universality* (Cambridge, UK: Cambridge University Press, 2011).

59. Marti Koskenniemi, *The Gentle Civilizer of Nations: The Rise and Fall of International Law 1870-1960* (Cambridge, UK: Cambridge University Press, 2002).

60. *Ibid.*

61. Apologies to the late Bola Ige.

62. Mark Lindley, *The Acquisition and Government of Backward Territory in International Law: Being a Treatise on the Law and Practice Relating to Colonial Expansion* (New York: Negro University Press, 1969).

63. Keith Nunes, "'We Can Do...Better': Rights of Singular Peoples and the United Nations Declaration on the 'Rights of Indigenous Peoples'" (1995) 7:3 St Thomas L Rev 521.

64. *Lagos Observer* (19 February 1885) quoted in UO Umozurike, "International Law and Colonialism: a Critique" (1970) 3 East African Law Review 47.

65. Johan Colding & Carl Folke, "The Taboo System: Lessons about Informal Institutions for Nature Management" (2000) 12:2 Geo Int'l Envtl L Rev 413. Taboo is an Anglicisation of the Polynesian word *tapu*. It refers to the concept of a prohibition or ban imposed by social custom or as a protective measure.

these "sacred groves" or habitats "represent the few remaining examples of closed-canopy forests."[66]

The second flaw was the economic predation in which local economies of African societies were violently reconfigured to serve the interests of the metropolis. This was evidenced by the destruction of forests and plantations of "cash crops." The colonized territories were forced to produce what they did not need and to purchase from the metropolis what they "needed."[67] Trademarks and patent regimes were set up to promote and defend the industrial goods, like lipsticks, soap, chocolate, etc., processed from the "cash crops" harvested from the colonies.[68]

The third flaw was the proselytization mission, which upended the previous religious and normative order in colonized Africa. Early international law was more or less an outgrowth of European Christianity.[69] In the words of Judge Mohammed Bedjaoui of the International Court of Justice: "this classical international law consisted of a set of rules with a geographical bias (it was a European law), a religious-ethical aspiration (it was a Christian law), an economic motivation (it was a mercantilist law) and political aims (it was an imperialist law)."[70] The religious order of colonized peoples in Africa was considered pagan and savage.[71] Thus, in the colonial encounter, the African herbalist/native healer, despite his/her vast knowledge of medicinal plants, was a key target of colonial vilification. Given its crucial role in the subordination of medicinal bio-cultural knowledge and institutions, this aspect warrants a more detailed analysis as I continue to explore the fundamental defects of the colonial structure of IPRs in Africa.

66. Taboos need not be permanent. For example, taboos may exist against the collection of certain species at some periods of their life cycle. Many plants are "taboo" in different parts of Africa.

67. Said, *Culture and Imperialism*, *supra* note 7; Said, *Power, Politics and Culture*, *supra* note 7; Said, *Orientalism* (New York: Vintage Books, 1979).

68. Makau wa Mutua, "What is TWAIL?" (2000) 94 American Society of International Law Proceedings 31.

69. For an examination of the ethnic character of international law, see Phillip Jessup, "Non-Universal International Law" (1973) 12:3 Colum J Transnat'l L 415; Rosemary Coombe, "The Cultural Life of Things: Anthropological Approaches to Law and Society in Conditions of Globalization" (1995) 10:2 Am U Int'l L Rev 791.

70. Mohamed Bedjaoui, "Poverty of the International Order" in R Falk, F Kratochwil & S Mendlovitz, eds, *International Law: A Contemporary Perspective* (Boulder, CO: Westview Press, 1985) at 153.

71. Mutua, *supra* note 68.

4. *The herbalist and the colonial encounter*[72]

The institution of traditional medicine and its credentialing mechanisms were primary targets of attack. In order to supplant traditional medicine practice, native healers and herbalists were delegitimized and branded as devilish despite their deep knowledge of herbs and healing methods.[73] According to Michael Balick:

> During the period of colonial imperialism, Western medicine was taken as a prime exemplar of the constructive and beneficial effects of European rule. Thus, western medicine was to the imperial mind, one of its most indisputable claims to legitimacy. Since western medicine was regarded as *prima facie* evidence of the intellectual and cultural superiority of Europeans, the figure of the medicine man or shaman was often viewed as inimical to social and cultural progress. Indeed the pejorative term 'witch doctor' has come to stand for savagery, superstition, irrationality and malevolence.[74]

Was the African "witch-doctor" truly a malevolent entity as portrayed in the colonial narrative? Quoting FSC Nortrop, Peter Morley also affirms that:

> One must seriously ask oneself whether superstition and myth, in the derogatory or non-scientific connotations of these words, are not due to our judging a given people from our conceptual standpoint, rather than theirs...[W]hen the trouble was taken to find their concepts, then it became evident that everything made sense and that their behaviour and cultural norms followed as naturally and consistently from their particular categories of natural experience as ours do from our own. I believe it is just as much an error to suppose that there were no people anywhere who insisted on empirically, and hence scientifically, verified basic concepts before Galileo. Prevalent as the latter is, it is nonetheless nonsense.[75]

---

72. This segment is substantially derived from my earlier work on Native Healing. See, Mgbeoji, "Beyond Patents," *supra* note 14.

73. H Thatoi & S Rout, *Medicinal Plants, Ethnomedicine & Biotechnological Potential* (Jodhpur: The Books Planet, 2011).

74. Michael Balick & Paul Alan Cox, *Plants, People and Culture: The Science of Ethnobotany* (New York: Freeman and Company, 1996).

75. Morley further observes: "Throughout the vast range of traditional medical systems are many beliefs and practices which contain an element of techno-empirical knowledge." See Peter Morley, "Culture and the Cognitive World of Traditional Medical Beliefs: Some Preliminary Considerations" in Peter Morley & Roy Wallis, eds, *Culture and Curing-Anthropological Perspectives on Traditional Medical Beliefs and Practices* (Pennsylvania: University of Pennsylvania Press, 1978) at 1. But see, ON Muchena & E Vanek, "From Ecology through Economics to Ethno-science: Changing Perceptions on Natural Resource Management" in DM Warren et al, eds, *The Cultural Dimensions Of Knowledge: Indigenous Knowledge Systems* (London: Intermediate Technology Publications, 1995).

Halfdan Mahler, the Director-General of the World Health Organization (WHO) in 1977 pointed out: "let us not be in doubt: modern medicine has a great deal still to learn from the collector of herbs."[76] The practices of herbalists have been defined by WHO—as "the sum total of the knowledge, techniques, skills and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not to Western science, used in the maintenance of health, as well as in the prevention, diagnoses, improvement or treatment of physical or mental illness."[77] Mahler's summons granted official imprimatur to non-Western traditional knowledge of the medicinal uses of herbs, a system that has served billions of people for millennia. In reality, in many traditional African societies, the native healer is both a complex person and an institution in itself.[78]

As I have argued elsewhere,[79] there are different classes and categories of native healers, but there are two broad categories: spiritualists and herbalists. There are cases where the healer is also a diviner and vice versa, but the point remains that native healing is a complex and sophisticated institution as opposed to the absurd simplification often found in the literature.[80] Herbalists generally possess encyclopedic knowledge of medicinal plants and this explains why they tend to enjoy the attention of both individual Western scholars and institutions interested in prospecting for medicinal plants and bio-cultural remedies.

Recent discussions on the application of IPRs to medicinal bio-cultural knowledge have focused on the knowledge possessed by herbalists. The emphasis has thus been on the "active" ingredients of medicinal plants without reference to the cultural frameworks and belief-systems in which such knowledge has been gained and developed over several millennia.[81] Such focus, by the biotechnology industry and scholars, on the herbalist's phenomenal knowledge of the medicinal uses of plants has tended to dissociate that knowledge from the wider cultural and holistic context in

76. Erwin Ackerknecht, *Medicine and Ethnology* (Baltimore, MA: Johns Hopkins Press, 1991).

77. WHO, *General Guidelines for Methodologies on Research and Evaluation of Traditional Medicine* (2000) at 1.

78. AN Okoro, "Chukwu ka Dibia," *Ahiajoku Lecture* (Owerri, Nigeria: Ministry of Information and Culture, 1988).

79. Mgbeogi, "Beyond Patents," *supra* note 14.

80. WIPO, *Consolidated Analysis of the Legal Protection of Traditional Cultural Expressions/ Expressions of Folklore, Background Paper* 1 (2003); Valsala Kutty, *National Experiences with the Protection of Expressions of Folklore/Traditional Cultural Expressions, Study No 2* (WIPO, 1999).

81. Anil K Gupta, *Study on the Role of Intellectual Property Rights in the Sharing of Benefits Arising from the Use of Biological Resources and Associated Traditional Knowledge, Study No 4* (WIPO-UNEP, 2004).

which both the diviner and the herbalist operate.[82] As rightly pointed out by Chidi Oguamanam, "the emphasis on active ingredients...advances not only the Western scientific culture but also advocates 'mercantilism' and 'extractivism' with which Western science and its intellectual property allies have besieged indigenous knowledge systems."[83] The art and science of native healing often embraces a holistic approach to well being that transcends the chemical composition of the concoction or herbal decoction.

It is telling that the social processes by which native healers acquire, transmit, and modify knowledge have been posited as one of the grounds upon which medicinal bio-cultural knowledge is not eligible for intellectual property protection.[84] While IPRs should not be recommended for bio-cultural knowledge, the underlying arguments and assumptions are simply false and evidence the residual colonial mindset of contemporary IPRs policy-makers.

The fourth flaw was the cultural assault mounted on the knowledge framework and epistemic communities in pre-colonial Africa. The attack was simply a racist assault on the intellect and intellectual capacity of African peoples.[85] The infantilization of colonized peoples[86] through the mechanisms and principles of international law subordinated African epistemological structures to the disapproving supervision of Eurocentric credentialing systems. In effect, the colonized epistemic systems were deemed subordinate, a subaltern,[87] to the "superior" imperial order. The obvious implication is that IPRs systems, like similar aspects of European values, norms, institutions, etc., must be internalized by colonized societies if such colonized societies are to be regarded as worthy of membership in the elect club of "developed" and "civilized" society.[88]

---

82. Chidi Oguamanam, *International Law and Indigenous Knowledge: Intellectual Property Rights, Plant Biodiversity, and Traditional Medicine* (Toronto: University of Toronto Press, 2006) at 98.
83. *Ibid.*
84. Ruth Gana, "Has Creativity Died in the Third World? Some Implications of the Internationalization of Intellectual Property" (1995) 24 Denv J Int'l L & Pol'y 109.
85. David Slater, "Contesting Occidental Visions of the Global: The Geopolitics of Theory and North-South Relations" (1994) 4 Beyond Law 97.
86. *General Act of the Conference of Berlin*, reprinted in RJ Garvin & JA Betley, eds, *The Scramble for Africa: Documents on the Berlin West African Conference and Related Subjects 1884–1885* (Ibadan: Ibadan University Press, 1973); see also, *The Convention Concerning the Protection and Integration of Indigenous and other Tribal and Semi-Tribal Populations in Independent Countries*, 26 June 1957, 328 UNTS 247.
87. On the subaltern, see, Walter Mignolo, *Local Histories/Global Designs: Coloniality, Subaltern Knowledges and Border Thinking* (New Jersey: Princeton University Press, 2000); GC Spivak, "Can the Subaltern Speak?" in Cary Nelson & Lawrence Grossberg, eds, *Marxism and the Interpretation of Culture* (London: Macmillan, 1988).
88. Makau Wa Mutua, "Savages, Victims and Saviours: The Metaphor of Human Rights" (2001) 42:1 Harv Int'l LJ 201.

Given the assumption that colonized peoples were intellectually weak, it followed that there would be no intellectual works and innovations worth protecting through the mechanisms of the dominant IPRs regimes.[89] Thus, while Western-styled IPRs systems enjoyed a position of privilege,[90] indigenous knowledge systems were largely dismissed as childish notions of "inferior creatures of God."[91] Indeed, it is not a coincidence that some of the most dominant and influential writings on early IPRs theory stemmed from Immanuel Kant and John Hume, two unrepentant racists.[92]

Given the superior-inferior relationship between the colonial order and the colonized peoples, the foundation of early IPRs regimes, especially patents and copyrights, was not designed to acknowledge and protect the staggering achievements of pre-colonial Africa[93] in the areas of folklore,[94] music, sculpting, bronze-work, and agriculture. For centuries therefore, traditional knowledge frameworks and their credentialing mechanisms were denied legitimacy, scholarly recognition, and legal protection.[95]

The subordination of medicinal bio-cultural knowledge[96] and the "other-ing" of African epistemic products in the field of IPRs was also facilitated by both lingual and jargon barriers imposed by the colonial system.[97] On the former, protection of various forms of intellectual products was predicated on the use of "official" or "scientific" language prescribed by the imperial order. Thus, intellectual products which could not be transcribed into European languages or into epistemic jargons could not qualify for IPRs protection. Herbalists who could not transcribe

89. Marie Battiste & James Henderson, *Protecting Indigenous Knowledge and Heritage: A Global Challenge* (Saskatoon: Purich Publishing, 2000).

90. Ikechi Mgbeoji, "Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Biopiracy?" (2001) 9:1 Ind J Global Leg Stud 163.

91. Brian Easlea, *Witch-Hunting, Magic, and the New Philosophy: An Introduction to Debates of the Scientific Revolution, 1450–1750* (Brighton: Haverfield Press, 1980).

92. Kant declared in his lecture notes that Native Americans had no capacity for culture and that Negroes have only a capacity for slave culture. See Robert Bernasconi, "Kant as an Unfamiliar Source of Racism" in JK Ward & TL Lott, eds, *Philosophers on Race: Critical Essays* (Oxford: Blackwell, 2002) 145. John Hume posited that some races are incapable of reflective capacity and moral action: see J Immer Wahr, "Hume Revised Racism" (1992) 53 Journal of the History of Ideas 481.

93. Basil Davidson, *The African Past: Chronicles from Antiquity to Modern Times* (New York: Grosset & Dunlap, 1967); Cheikh Anta Diop, *Precolonial Black Africa* (Brooklyn: Lawrence Hill Books, 1987).

94. Isidore Okpewho, *The Epic in Africa: Toward a Poetics of the Oral Performance* (New York: Columbia University Press, 1975).

95. Martha Johnson, ed, *Lore-Capturing Traditional Environmental Knowledge* (Ottawa: International Development Research Centre, 1992).

96. Vandana Shiva, *Staying Alive-Women, Ecology and Development* (London: Zed Books, 1988) at 31.

97. George Meyer, Kenneth Blum & John Cull, eds, *Folk Medicine and Herbal Healing* (Illinois: Charles Thomas Publisher, 1981).

their medicines into chemical formulae recognized and approved by the credentialing authorities of the imperial order were frozen out of the spheres of respect and legal protection for their works.[98] Similarly, the requirements of technical jargons in the fields of chemistry, biology, botany, agriculture, etc., led to the exclusion and non-recognition of the intellectual attainments of colonized cultures unfamiliar with the preferred jargons of Western epistemic communities.

This largely explains why the realm of language has remained a veritable ground of resistance in the colonial encounter. In Nigeria, in the author's experience, the attack on local languages and the displacement of local languages by English may be likened to the incineration of thousands of libraries. As the native speakers of local languages die off or are unable to transmit their medicinal bio-cultural knowledge to younger generations, incalculable losses are incurred on a daily basis.

The creation and compulsory use of jargons (scientific and otherwise) as a mechanism of gate-keeping, credentialing, and assimilating African indigenous epistemic communities into the "mainstream" of Western scientific thought and epistemology has served to sterilize and marginalize medicinal bio-cultural knowledge.[99] To date, some of our pertinent legislation on use and sale of herbal remedies requires that the maker must disclose the ingredients of the herbal remedies in "scientific" jargon.[100] Similarly, applications for patent protection have to be made in jargons inaccessible to the average herbalist.

The fifth and perhaps most insidious flaw in the colonial foundations of IPRs institutions is that IPRs regimes were designed to enable and facilitate colonial economic priorities. IPRs regimes were so important to the imperial powers that the Trademarks and Patents Offices in several African states were established in those states even before those states were formally organized and recognized. In structure and content, IPRs institutions were designed to cater to imperial interests. For example, most patent regimes in African states have little or no role in determining

98. Marie Battiste, ed, *Reclaiming Indigenous Voices and Vision* (Vancouver: University of British Columbia Press, 2000).

99. Slater, *supra* note 85. As famous Nigerian author Chinua Achebe warns:

> to those who believe that Europe and North America have already invented universal civilization, and all the rest of us have to hurry up and enrol, what I am proposing will appear unnecessary if not downright foolish. But for others who may believe with me that universal civilization is no where yet in sight, the task will be how to enter the preliminary conversations.

Home and Exile (New York: Oxford University Press, 2000) at 104 [Achebe, *Home*].

100. See, e.g., *National Agency for Food and Drug Administration Control Act*, NG 1993, No 15, also available online: AKSJ <http//:www.aksjlegalresource.com>.

whether a particular invention was deserving of legal protection. The decisions were made in London and other metropolitan capitals and expected to be affirmed in the colonies. Little has changed on that front. Most patent applications undergo substantive examination in Geneva and their decisions are routinely affirmed in African state capitals. Similarly, the trademark system was designed to protect classes of goods manufactured and sold in the African market. Again, little has changed on that front.

Perhaps the most disturbing aspect of the colonial capture and detention of Africa's IPRs regime is the colonial mindset of our IPRs administrators. Evidence of this phenomenon abounds in our IPRs laws and administrative mechanisms, the laws regulating the sale of traditional medicinal remedies in Nigeria (*NAFDAC Act & Traditional Medicine Acts*),[101] Geneva-centric orientation of IPRs laws administration in Africa, and the failure of Africa's IPRs administrators to design and implement IPRs laws and policies tailored to meet the needs and aspirations of Africans and the cultural heritage of Africa. Scarce resources are deployed by our IPRs administrators in defence of foreign IPRs,[102] while African IPRs languish in the doldrums.

Although African states have treaty obligations in the realm of IPRs, the margins of discretion in the areas of administration have been left fallow. While most states may have similar statutory provisions in IPRs laws, the real difference often resides in the manner in which IPRs laws are administered. There is enormous room for discretion and policy initiatives in the area of administration. The lamentable rot in Africa's IPRs regimes is largely a direct result of the uninspired manner in which IPRs laws have been administered in the post-colonial era. Unlike other former colonies such as India and Brazil which have exercised their discretion in the domestic administration of IPRs treaties and conventions to advance domestic agendas, little has changed in the metropolis-colony relationship between the imperial powers and the African IPRs landscape. Since the colonial conquest of Africa by the imperial powers, the practice of IPRs law in the continent has barely improved on both substantive and procedural levels.

For example, in the past decade India has created an impressive database of medicinal bio-cultural knowledge, which has been used as a bulwark against biopiracy and appropriation of Indian traditional medicine.

101. *Ibid* and *National Agency for Food and Drug Administration Control Regulations & Procedure* [copy on file with the author].

102. Peter Yu, "The TRIPS Enforcement Dispute" (2011) 89:4 Neb L Rev 1046; Peter Yu, "Enforcement, Economic and Estimates" (2010) 2 WIPO Journal 1.

Similarly, the Indian equivalent of *NAFDAC* has been focused on the efficacy of herbal medicine sold in India rather than compelling Indian herbalists to disclose the secrets of their herbal remedies.[103] In addition, states such as India, Peru, and Brazil have developed legal regimes for the protection of bio-cultural knowledge.[104] These developments stand in contrast to the situation in several African states where little or no initiative has been seized by the IPRs administrators to tailor the operational mechanisms of IPRs enforcement in ways that reflect national priorities and concerns. Sadly, our IPRs laws and institutions remain tools and mechanisms for the colonial capture of African bio-cultural knowledge.[105]

II. *Charting escape routes*

In order to chart the way forward, we should, as Chinua Achebe once counseled, determine from whence the rain started to beat us.[106] The first task is for IPRs administrators in African states to recognize the need for a critical engagement with the structure and process of global IPRs,[107] especially in this era of explosive growth in biotechnology. For nearly one-hundred years, the branch of law known as IPRs has been treated by many African universities as an after-thought, an appendage to other disciplines of law. A business-as-usual approach, in which IPRs administration in African states is no more than filing and registering all manner of IPRs applications, is simply antiquated and counter-productive.

There is glaring evidence that neither lawyers nor IPRs administrators are up to speed with the best practices and cutting edge developments in the world of IPRs. No honest observer will seriously argue or contend that lawyers involved in IPRs practice in many African states, especially in sub-Saharan states, can match the best IPRs lawyers in the world. Indeed, the environment in which IPRs law practice is undertaken in several African states is largely devoid of serious intellectual exertions. Consequently, save in extremely rare exceptions, the vast majority of what passes for IPRs legal practice in Africa is an exercise in clerical drudgery. IPRs practice in African states is little more than running errands and performing clerical assignments for the major law firms of Europe and North America. The colonial structure of the IPRs process in Africa is alive and well.

---

103. Srie Vidhva Rajavan, "Protection of Traditional Knowledge" (2001) 2 Minn Intell Prop Rev 8.
104. Murat Kartal, "Intellectual Property Protection in the Natural Drug Discovery: Traditional Herbal Medicine and Herbal Medicinal Products" (2007) 221:2 Phytotherapy Research 113.
105. Chidi Oguamanan, "Patents and Traditional Medicine: Digital Capture, Creative Legal Interventions, and the Dialectics at Knowledge Transformation" (2008) 15:2 Ind J Global Legal Stud 489.
106. Achebe, *Home*, *supra* note 99.
107. Peter Yu, "TRIPs and Its Achilles' Heels" (2011) 18:2 J Intell Prop L 479-530.

Despite the abundance of human talent on the continent, it needs to be said quite bluntly that the administration of IPRs in Africa leaves much to be desired. Little African case law on IPRs has been important or seminal enough to command the scholarly attention or judicial notice of foreign courts outside the continent. The causes of this terrible state of affairs are not difficult to discern.

In patent law, for example, the most disturbing lacuna on the legislative and administrative fronts is the absence of substantive examination in the processes leading to the grant of patents. Most patent offices in Africa are merely engaged in the mechanical stamping and sealing of foreign applications without regards to the issue of whether the application for patent is meritorious. If truth be told, in matters of patent protection for inventions, most law firms and lawyers are glorified clerks tasked with the burden of filing and registering foreign applications, the substance of which they hardly understand or comprehend. The system created by the colonial forces for the re-registration of foreign patents in African states, without any examination or questions asked by the African municipal office, has barely changed more than fifty years after the formal end of colonialism in Africa.[108]

Virtually all of the *Patent Cooperation Treaty* (*PCT*) applications filed in African States are drafted by foreign patent lawyers and mailed to lawyers in African States for entry into the National Phase![109] There is zero input from African IPRs lawyers. As soon as the WIPO office of the *PCT* in Geneva gives the approval, the African patent office obeys in a robotic fashion. Such is the state of law and procedure on patent grants in most African states.

On trademarks, if there are improvements on the legislative front, there have been next to none at the procedural level. Since the emergence of the trademarks offices more than a century ago in various African states, the current administrative processes at the trademarks registries often rely on manual filing of applications. Very few trademarks registries have computerized databases of registered trademarks. Records are kept in dog-eared files. Important data are often stored in pieces of cardboard paper. Files disappear or are unavailable when needed. Searches are still conducted today in the same manner it was done a century ago. Files have been known to be ruined by the elements such as rain, excessive exposure to sunlight, etc.

108. Peter Drahos, *The Global Governance of Knowledge-Patent Offices and their Clients* (Cambridge: Cambridge University Press, 2010).
109. *Patent Cooperation Treaty*, 19 June 1970, Can TS 1990 No 2.

Similarly, opposition proceedings in many African trademarks registries lack sufficient rigor. It is not uncommon for opposition proceedings to be conducted in ill-equipped rooms with little or no official records kept. The decisions on opposition proceedings are not published for public scrutiny and notice, except on the relatively few occasions when such decisions become the subject of court proceedings and get indirectly reported in the judgments of the appropriate tribunal. In countries with functional and responsive IPRs regimes, the vast majority of court decisions on IPRs disputes arise from contested decisions of administrative tribunals. In the light of the foregoing, it is no coincidence that there is a paucity of African jurisprudence on issues of IPRs law.

Second, African states need a clear industrial policy which should give pride of place to their wealth of medicinal bio-cultural knowledge. It is impossible to have a responsible and responsive IPRs regime without a credible industrial policy. An industrial policy must of necessity determine and locate the roles which Africa's bio-cultural wealth can play in the various sectors including healthcare, agriculture, industrial production and manufacturing, environmental protection, and etc.

Third, the African voice is non-existent in important developments at the international level on the emerging regimes on protection of bio-cultural knowledge.[110] While other parts of the world have taken important steps towards the regulation of access to bio-cultural knowledge,[111] as demonstrated in the *Nagoya Protocol*,[112] African IPRs administrators seem oblivious of current developments in the field.[113] On occasions when the officials show up, there is almost always an embarrassing silence or lack of engagement with the issues.

Drahos and Braithwaite have, amongst several other scholars, documented the scale and extent of African absence from the policy-making process in international IPRs regimes.[114] It would seem that

110. S Wiessner & M Battiste, "The 2000 Revision of the United Nations Draft Principles and Guidelines on the Protection of the Heritage of Indigenous Knowledge" (2000) 13:1 St Thomas L Rev 383.

111. Traci McClellan, "The Role of International Law in Protecting the Traditional Knowledge and Plant Life of Indigenous Peoples" (2001) 19:2 Wis Int'l LJ 249.

112. "Access to Genetic Resources and the Fair and Equitable Sharing of Benefits arising from their Utilization" (Nagoya, Japan: Tenth Meeting Conference of the Parties to the Convention on Biological Diversity, 18-29 October 2010).

113. See for example, *African Model Legislation for the Protection of the Rights of Local Communities, Framers, and Breeders, and for the Regulation of Biological Resources* (2000) OAU Model Law (on file with the author).

114. Braithwaite & Drahos, *Information Feudalism: Who Owns the Knowledge Economy* (New York: New Press, 2003).

African delegates are more interested in shopping and sight-seeing.[115] The most egregious example of lack of engagement with international IPRs policy is, perhaps, the near complete absence of African input in the negotiations heading towards the conclusion of the TRIPs Agreement. As Daniel Gervais observed, there was little or no substantive input from the African legate. In fact, it was during the high water mark of the HIV-AIDS crisis in sub-Saharan Africa that the extent of African disengagement from the TRIPs process was revealed. Delegates from "smaller" but better organized states have been known to make notable and important contributions towards international policy instruments in IPRs. The lack of engagement with recent and contemporary developments on governance of bio-cultural knowledge is further evidenced by the lack of domestic regulations on patent disclosure requirements related to genetic resources and traditional knowledge. Surprisingly, African IPRs administrators visit the WIPO office in Geneva as frequently as they can. We are out of sync, by at least a generation, with legal developments on issues of governance of bio-cultural knowledge. These are interesting times and we must rise to the challenge.[116] There is simply too much "ad-hocry" in African approaches to IPRs governance.[117]

Fourth, there are few adequate domestic provisions regulating access to and exploitation of African bio-cultural knowledge. The lack of adequate legal regulation of access to bio-cultural resources enables unscrupulous and foreign entities to profit from African bio-cultural knowledge. Many African research institutes are far too excited to be seen "collaborating" with foreign bio-prospectors, so that little regard is paid to the legal and economic ramifications of such "collaboration."[118] Perhaps African IPRs administrators can borrow a leaf from India where a comprehensive database of bio-cultural knowledge is being collated by a team of more than 100 science graduates most of whom have doctoral degrees in such fields as pharmacy, botany, pharmacology, etc. This is urgent given that many of the experienced herbalists are dying off without a sufficient younger generation of herbalists to take their place. Much can be achieved

115. Daniel Gervais, "Intellectual Property: The State of Play" (2005) 74:2 Fordham L Rev 505 at 507; Bita Amani & Rosemary Coombe, "The Human Genome Diversity Project: The Politics of Patents at the Intersection of Race, Religion and Research Ethics" (2005) 27 Law & Pol'y 152 at 172-173.

116. Peter Yu, "The Global Intellectual Property Order and its Undetermined Future" (2009) 1 WIPO Journal 1 [Yu, "Undermined Future"].

117. *Supra* note 45.

118. WIPO, *Technical Study on Patent Disclosure Requirements Related to Genetic Resources and Traditional Knowledge, Study No. 3* (2002).

by building meaningful coalitions with countries that have successfully broken the yoke of colonial agenda-setting on IPRs issues.[119]

Fifth, it is now imperative for the governments of various African states to set up mechanisms in which domestic protocols for the protection of bio-cultural knowledge will receive legal backing. Such protocols need not be modelled after Western intellectual property rights. For example, countries such as India, Brazil, Peru, and Bolivia require that patents on bio-cultural resources cannot be granted unless the applicant presents a Certificate of Origin. These requirements often ask that the applicant demonstrate that the materials were sourced in a legal and ethical manner.[120]

Sixth, given Africa's wealth in biological diversity and bio-cultural knowledge[121] efforts should be geared towards adapting some of the amenable IPRs regimes including certification marks, Geographical Indications, and Indications of Origin to promote and protect bio-cultural knowledge including various species of yams, shea butter tree, palm oil trees, bitter-kola, alligator pepper, etc.[122]

Further, it is high time we addressed the issue of the neo-colonial[123] orientation of our IPRs administrative bodies. For too long, our IPRs administrative institutions have operated as extensions of imperial states by devoting substantial resources to projects and issues that are of interest to foreign states and interests while failing to adapt IPRs laws and procedures to matters of importance to Africa.[124] Too often, our IPRs law administrators adopt a servile attitude towards the West. They often go cap-in-hand, begging Western corporations for money and legitimacy.

Too often, African IPRs policies are designed to impress Geneva. This Geneva-centric approach to IPRs administration fails to take into account the historical contingencies of IPRs and the lessons immanent in the histories of states such as the United States of America, India, Italy, Brazil, and China. Historically, all states with strong stakes in IPRs have been known to adapt their IPRs regimes, especially the administrative component of IPRs regimes, to suit and serve their domestic industrial

119. Peter Yu, "Building Intellectual Property Coalitions for Development" in Jeremy deBeer, ed, *Implementing WIPO's Development Agenda* (Centre for International Governance Innovation & IDRC, 2008).

120. Yu, "Undermined Future," *supra* note 116.

121. *CBD*, *supra* note 16.

122. See for example, Chidi Oguamanam, "Genetic Resources & Access and Benefit Sharing: Politics, Prospects, and Opportunities for Canada after Nagoya" (2011) 22:2 J Envtl L & Prac 87.

123. Grace Woo, *Ghost Dancing with Colonialism* (Vancouver: University of British Columbia Press, 2011).

124. Sungjoon Cho, "The Demise of Development in the Doha Round Agreements" (2010) 45:3 Texas Int'l LJ 573.

needs depending on their domestic imperatives and stages of industrial prowess.

Finally, Africa needs a home-grown civil society presence in matters pertaining to IPRs governance. All over the world, most of the advances in the protection of bio-cultural knowledge have emanated from the insights, pressures, and agitations of civil society groups. These organizations possess the expertise, global connections, and resources to help improve our regime on protection of bio-cultural knowledge. The need for effective partnership between autochthonous African NGOs and international NGOs on matters pertaining to IPRs policies and governance cannot be over-emphasized. It is a credit to Hugh Kindred that in his teaching and scholarship, especially in international law, an abiding concern is with what states in fact do, rather than the glamour and ceremony of international interaction. This devotion to the nitty-gritty aspects of domestic application of international obligations to municipal realities has informed my comments and observations. It is doubtful that I would have been equipped to cast a practical gaze on African application of international IPRs obligations were it not for Hugh Kindred's gift of insight.